

Montana's Future Population & Hospital Costs

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The Montana Hospital Discharge Data System

Montana Hospital Discharge Data System



Montana Hospital Discharge Data System

- Office of Epidemiology And Scientific Support
- Montana Hospitalization Data
 - 2000-2012 Inpatient
 - 2010-2012 Emergency Department

Montana Hospital Discharge Data System

- Inpatient Admission
 - Nurse's notes
 - Admission notes
 - Billing form

Montana Hospital Discharge Data System

The form is a comprehensive data collection tool for hospital discharges. It is organized into several main sections, each with a specific purpose:

- Header Section:** Contains fields for patient name, date of birth, sex, race, and ethnicity.
- Admission Section:** Includes fields for admission date, time, and location.
- Diagnosis Section:** A large table with multiple columns for recording primary and secondary diagnoses, including ICD-9-CM codes and descriptions.
- Procedure Section:** A table for recording surgical and medical procedures, including ICD-9-CM codes and descriptions.
- Charges Section:** A table for recording charges for various services, including room, board, nursing, and other fees.
- Outcome Section:** Includes fields for discharge date, time, location, and status (e.g., discharged, died, transferred).
- Signature Section:** A section for the attending physician's signature and name.

The form is designed to be filled out by hospital staff, ensuring accurate and complete data collection for the Montana Hospital Discharge Data System.

Montana Hospital Discharge Data System

- Date of admission and discharge
- Demographics
 - County of residence
 - Age
 - Sex
- Diagnosis codes
- Procedure codes

Montana Hospital Discharge Data System

- Admitting notes: Patient was admitted for complications from diabetes, including ketoacidosis.

Montana Hospital Discharge Data System

- Diagnosis Codes
 - ICD-9: 250.10
 - ICD-10: E11.29

Montana Hospital Discharge Data System

- Data used for:
 - Grant applications
 - Program reports
 - Topical reports

Montana Hospital Discharge Data System

- Program reports
 - State Health Improvement Plan
 - Community Health Assessments
 - CDC burden reports

Montana Hospital Discharge Data System

- Topical Reports
 - Ambulatory-Care-Sensitive Conditions (PQIs)
 - Hepatitis C
 - Obesity
 - Circumcision

Health Care Utilization

- How do Montanans utilize healthcare?
- How will demographic changes affect utilization?

Health Care Utilization

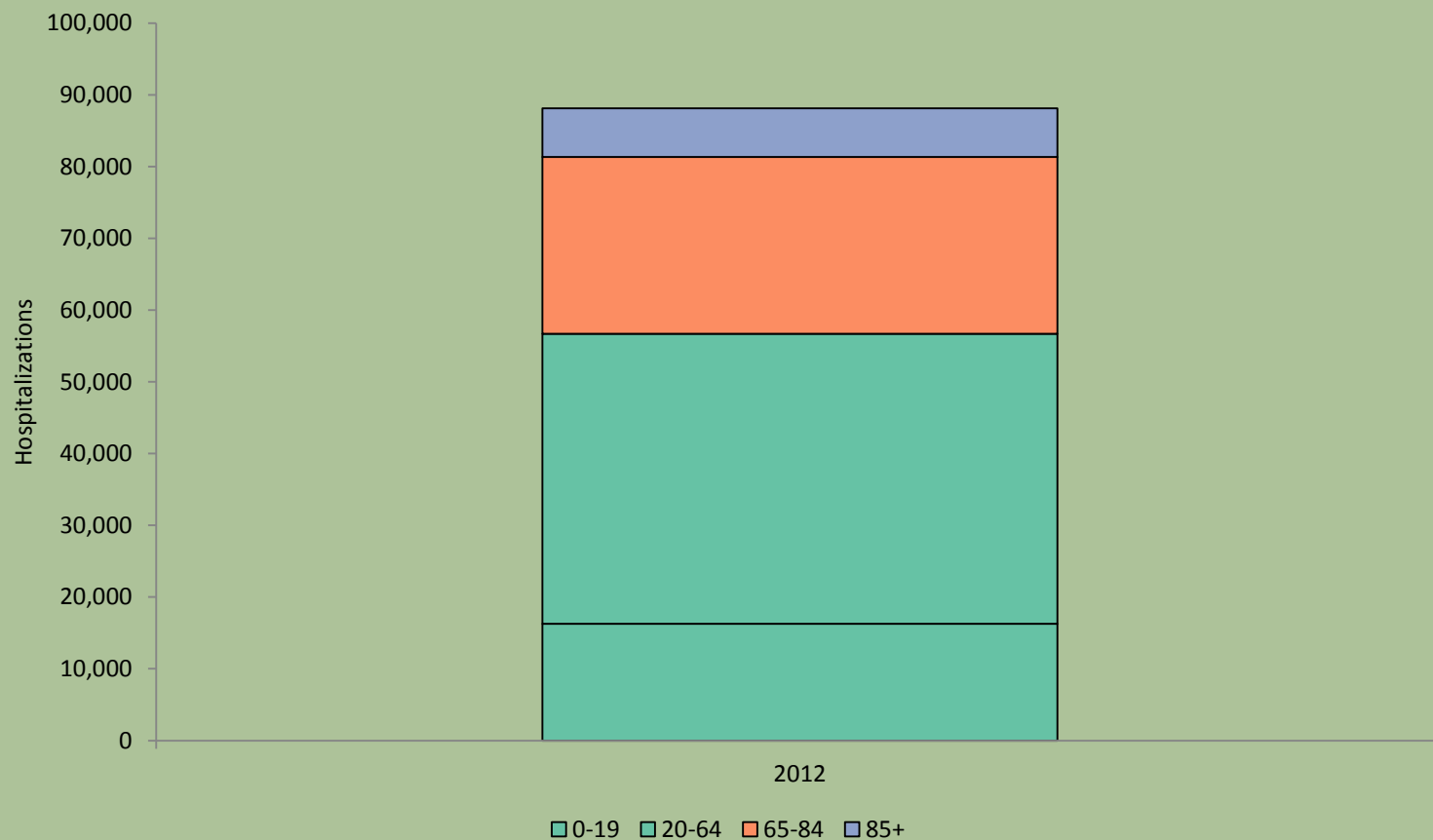
- About 90,000 admissions per year (2000-2012)
- Average charges (2012): \$22,000

Health Care Utilization

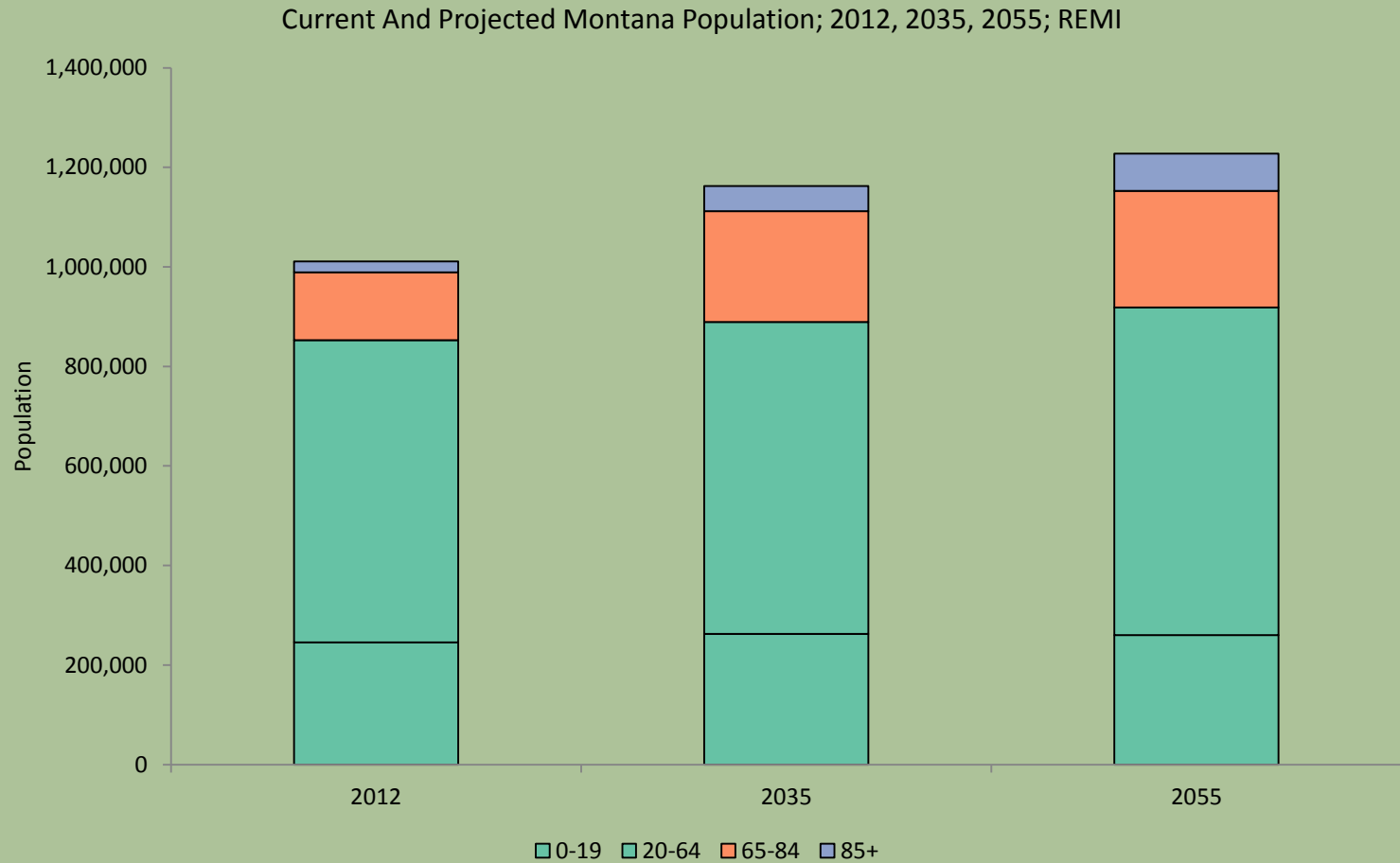
- Hospitalizations - Montana Hospital Discharge Data System
- Population – Census and Economic Information Center

Health Care Utilization

Hospitalizations, Montana Residents, Montana Hospital Discharge Data System

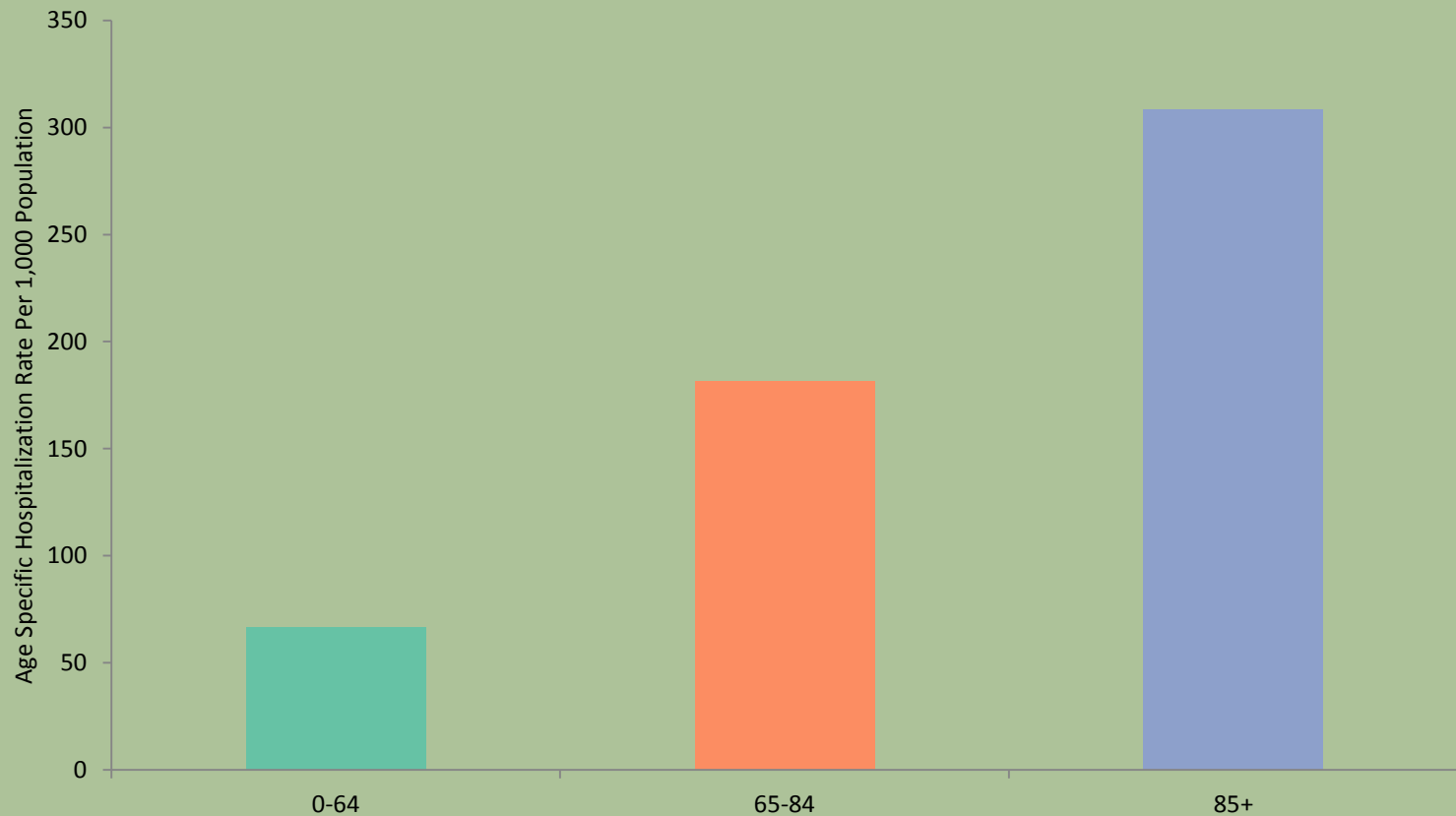


Health Care Utilization



Health Care Utilization

Hospitalization Rates for All Causes, Montana Residents, 2012, Montana Hospital Discharge Data System



Health Care Utilization

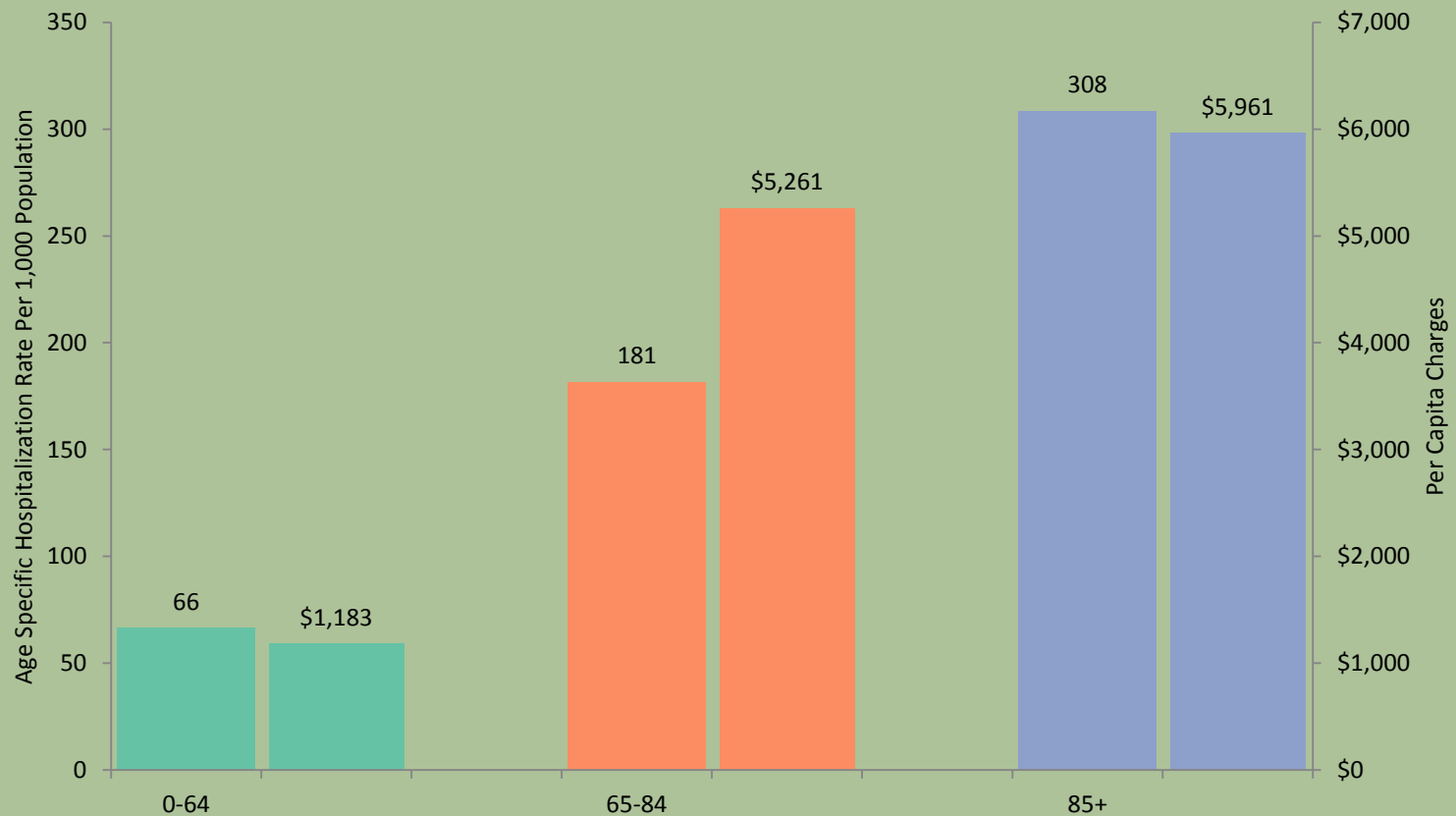
- Total hospitalizations to Montana residents were 88,000 (88 per 1,000 pop) in 2012.
- 28% of these hospitalizations are for persons aged between 65 and 84 years (182 per 1,000 pop).
- 7% of these hospitalizations are for persons aged 85+ (308 per 1,000 pop).

Health Care Utilization

- Total charges for all hospitalizations are \$1.9 Billion dollars (2012), \$1800 per person.
- 39% of these charges are for persons aged between 65 and 84 years (\$5300 per person).
- 7% of these charges are for persons aged 85+ (\$6000 per person).

Health Care Utilization

Hospitalization Rates and Per Capita Charges for All Causes, Montana Residents, 2012,
Montana Hospital Discharge Data System



Health Care Utilization

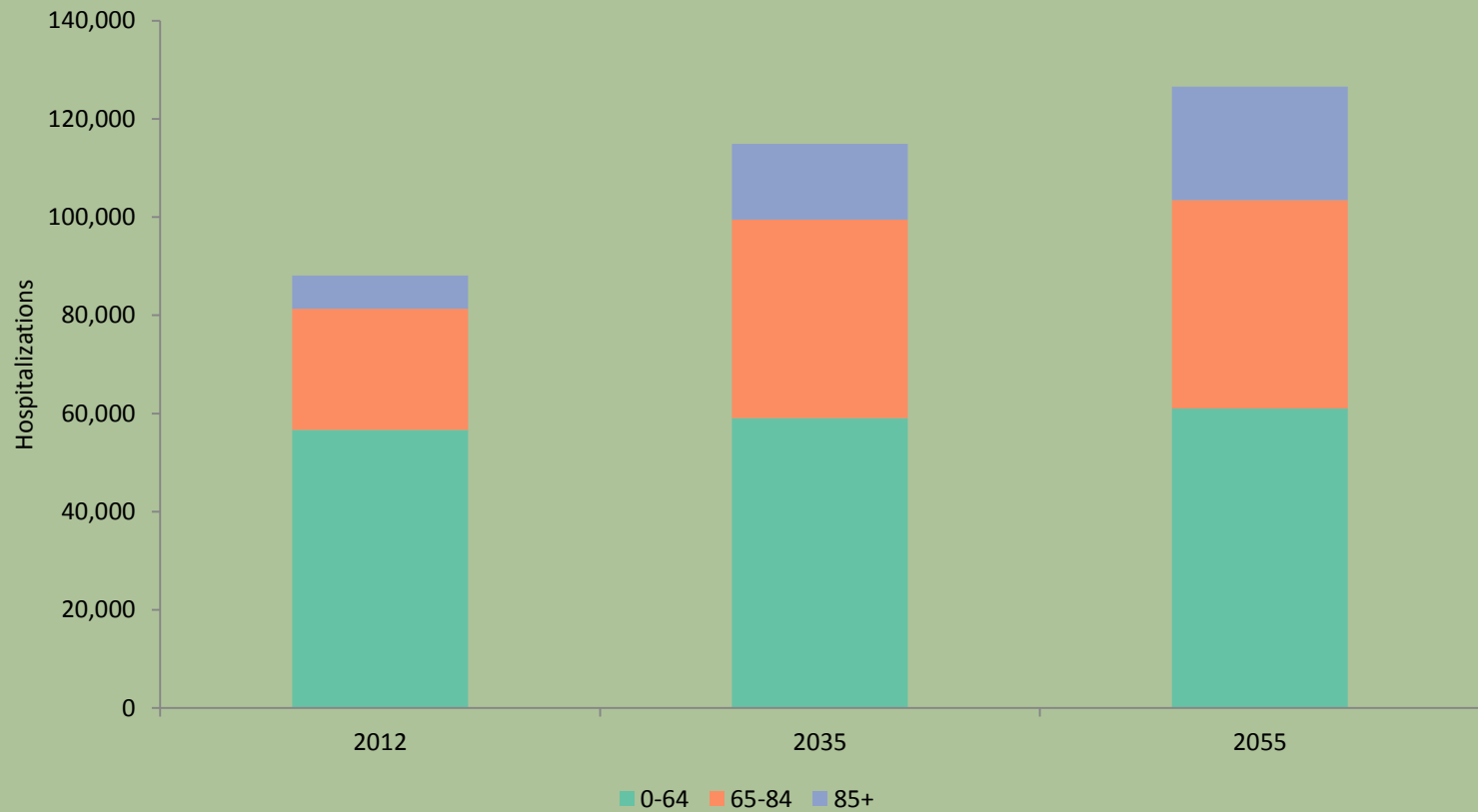
- We projected per capita utilization (hospitalization and charge) rates in 2012 to 2035 and 2055, accounting for the change in population.

Health Care Utilization

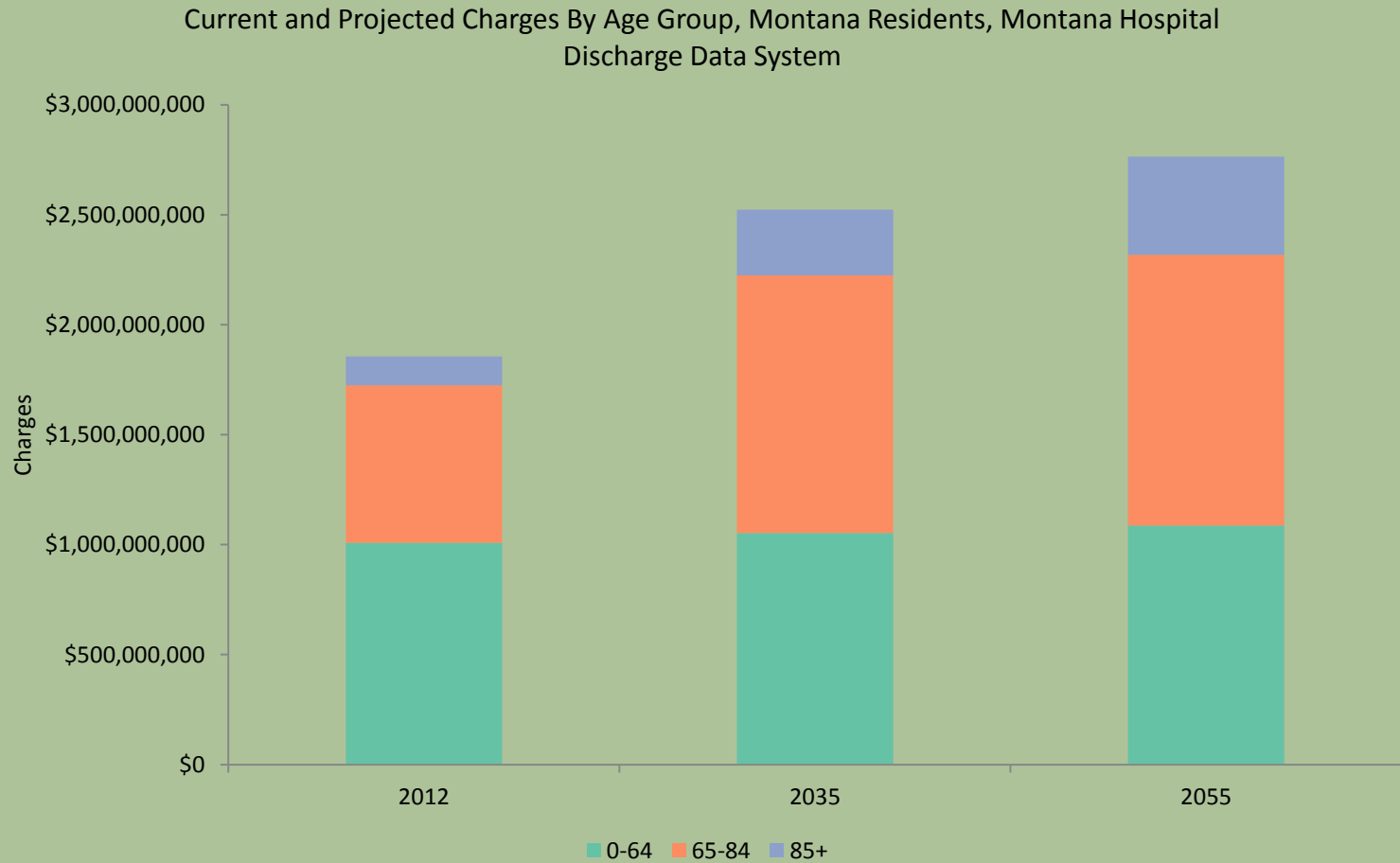
- Total hospitalizations (2012 rates) projected in 2035 and 2055: 115,000 and 127,000
- Total costs (2012 charges) projected in 2035 and 2055: \$2.5 Billion and \$2.8 Billion

Future Utilization

Current and Projected Hospitalizations By Age Group, Montana Residents, Montana Hospital Discharge Data System



Future Utilization



Case Study: Hip Fracture

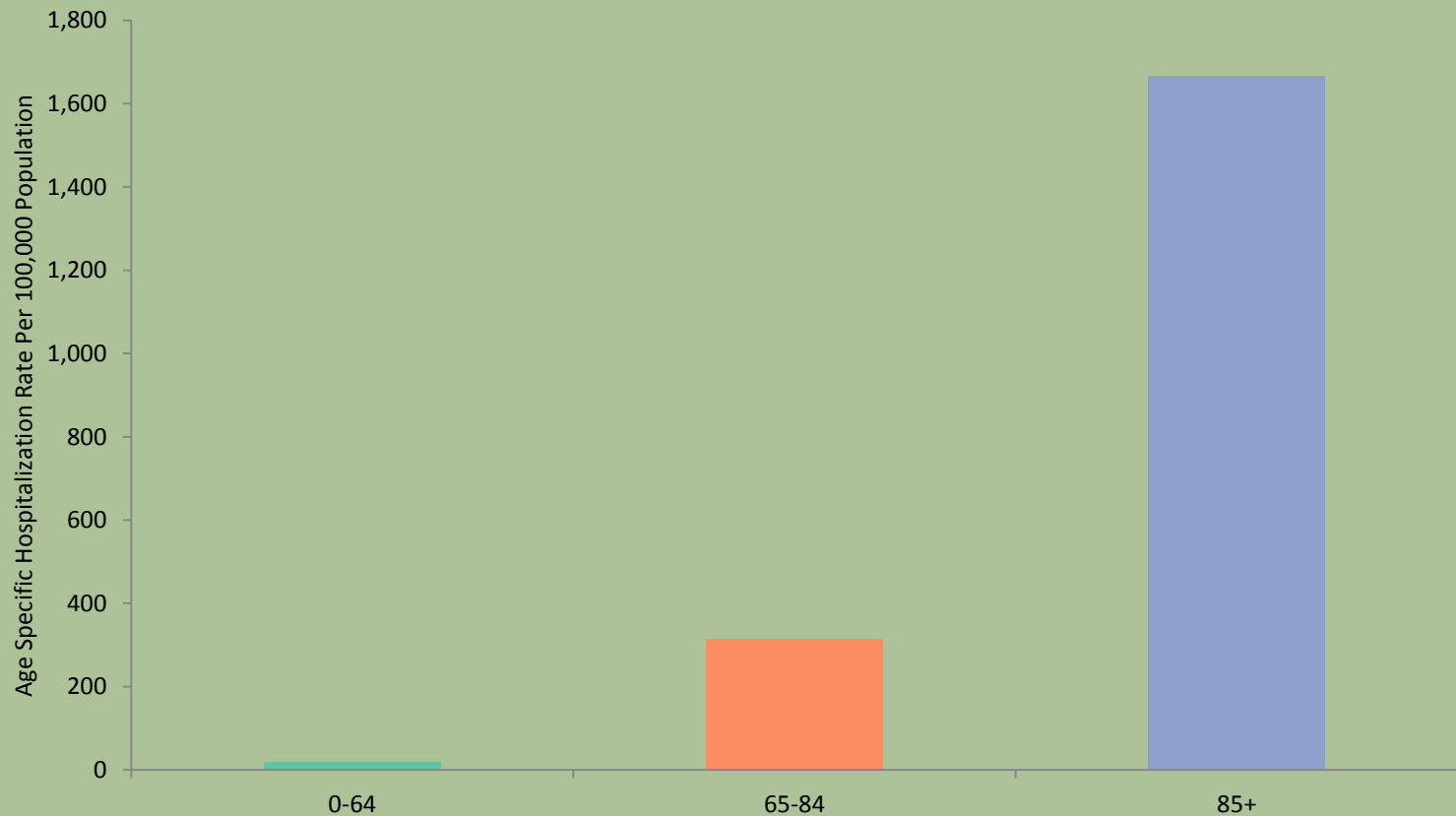


Case Study: Hip Fracture

- Expensive
 - \$35,000 per hospitalization (2012)
 - Ongoing
- Preventable
 - Falls
 - Occur at home

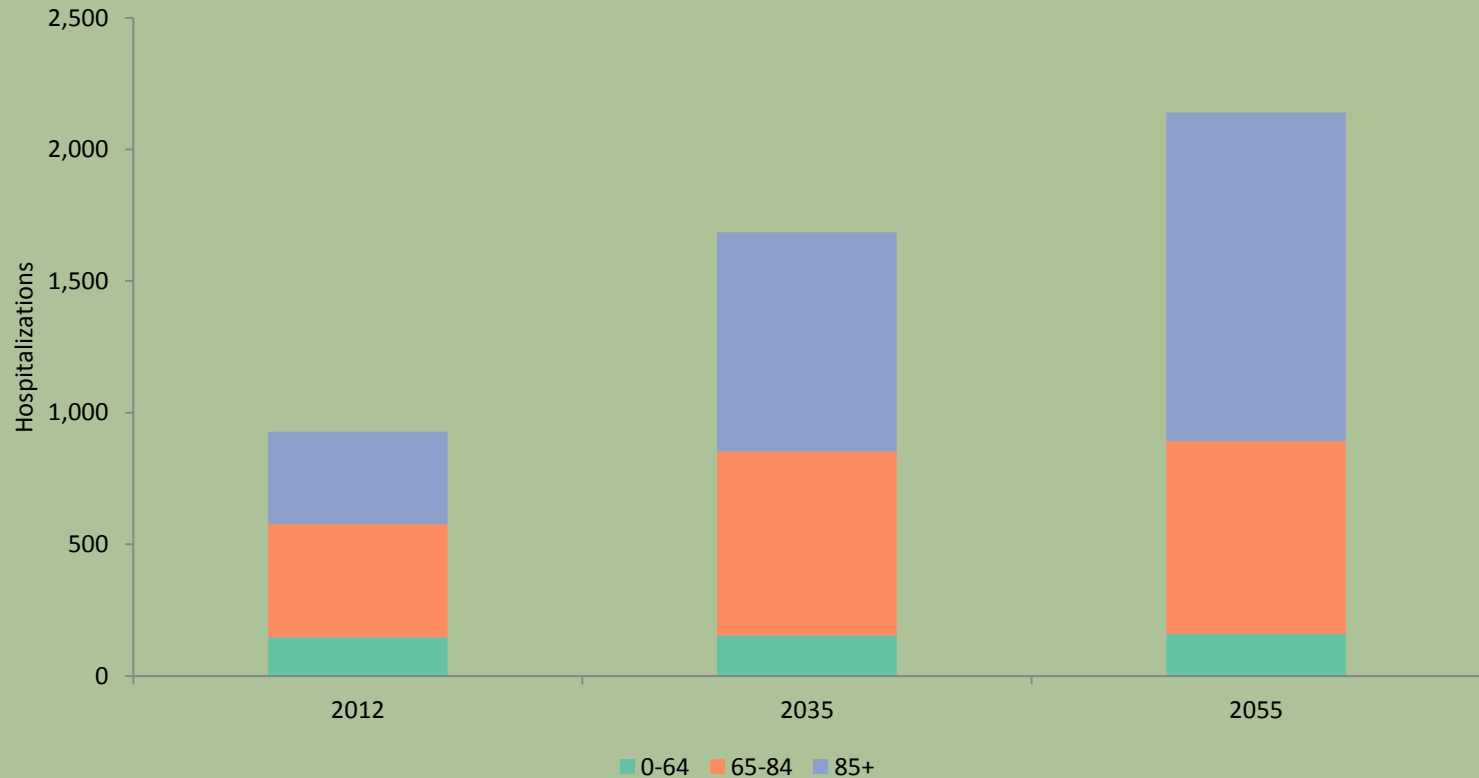
Case Study: Hip Fracture

Hospitalization Rates For Hip Fracture (ICD-9-CM: 820.xx), Montana Residents, 2012,
Montana Hospital Discharge Data System



Case Study: Hip Fracture

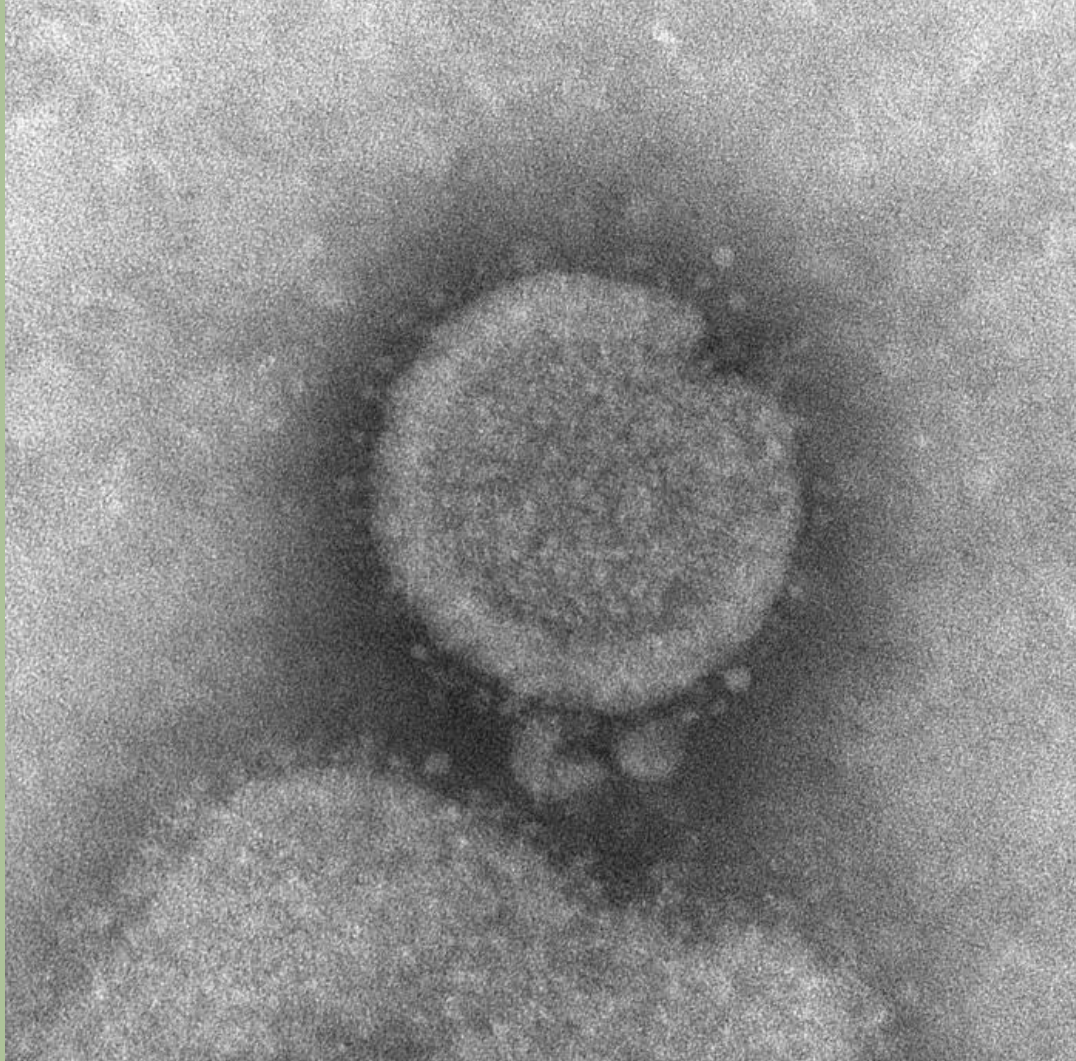
Current and Projected Hospitalizations for Hip Fracture (ICD-9-CM:820.xx), Montana Residents,
Montana Hospital Discharge Data System



Case Study: Hip Fracture

- Increases
 - Hospitalizations
 - Costs

Case Study: Pneumonia and Influenza



Case Study: Pneumonia and Influenza

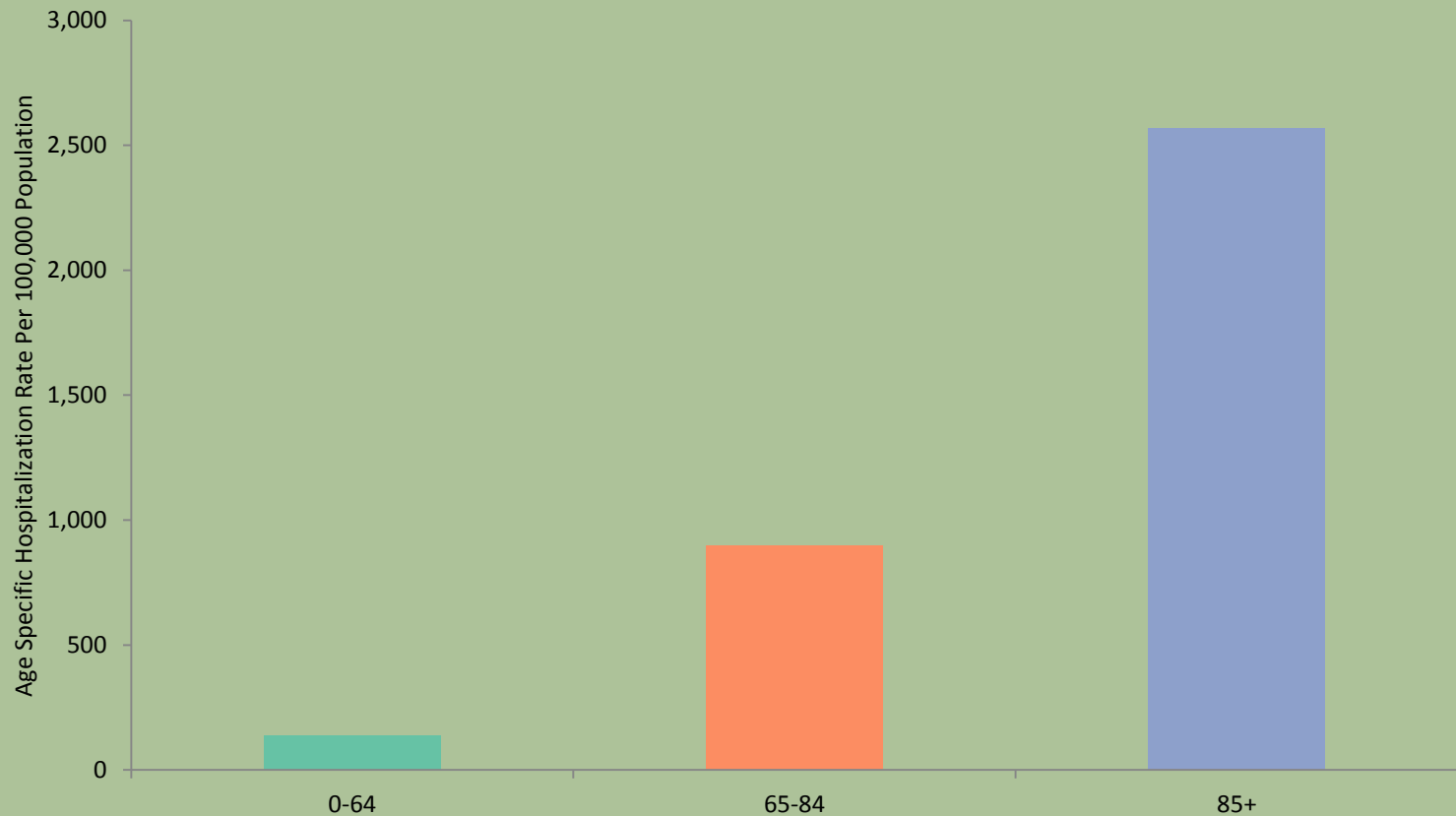
- Utilization
 - \$16,000 per hospitalization (2012)
- Epidemic
 - Outbreak
- Preventable
 - Vaccine

Case Study: Influenza and Pneumonia



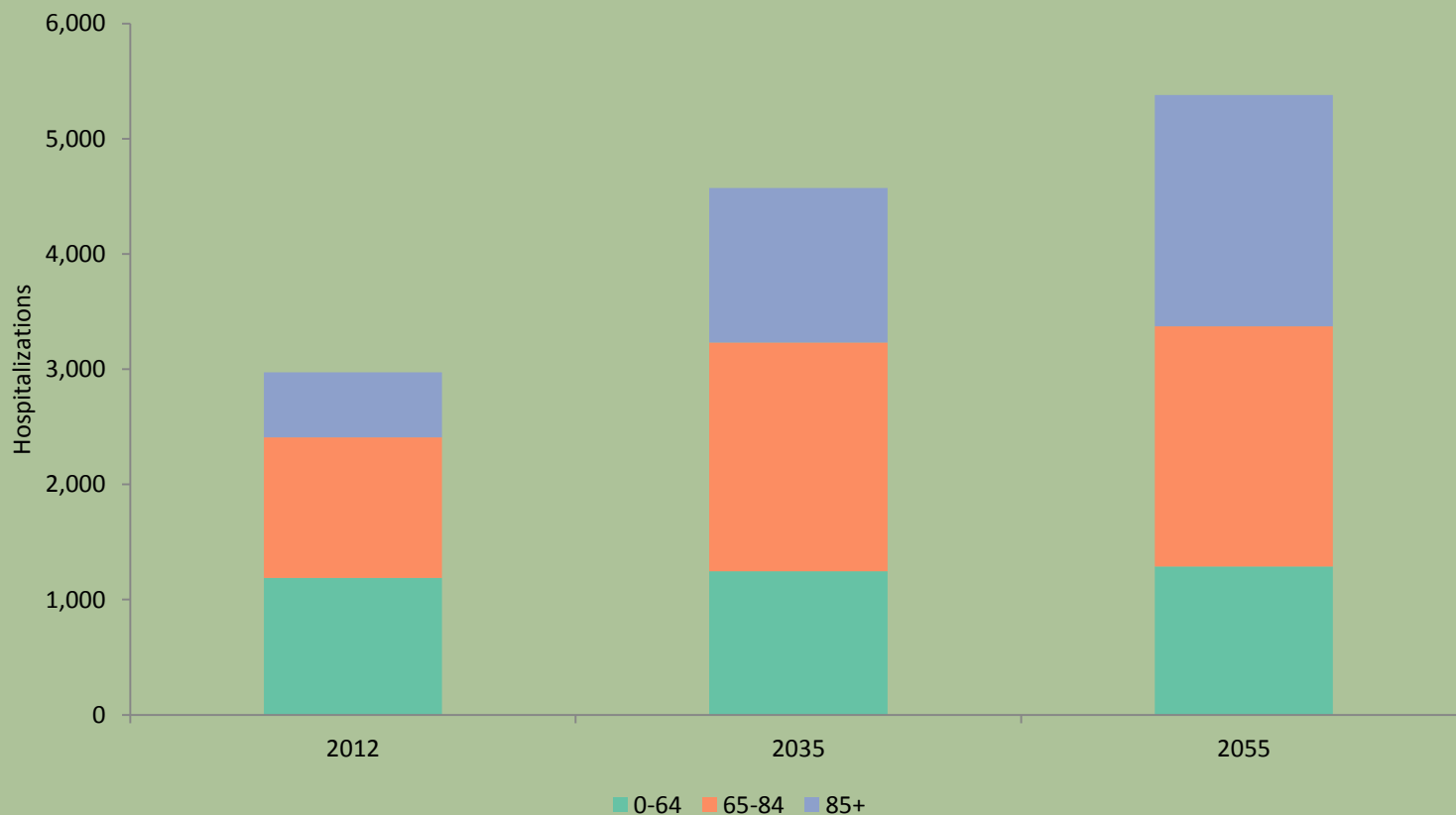
Case Study: Pneumonia and Influenza

Hospitalization Rates for Pneumonia and Influenza (ICD-9-CM: 480-488), Montana Residents, 2012, Montana Hospital Discharge Data System



Case Study: Pneumonia and Influenza

Current and Projected Hospitalizations for Pneumonia and Influenza (ICD-9-CM: 480-488),
Montana Residents, Montana Hospital Discharge Data System



Case Study: Diabetes Mellitus

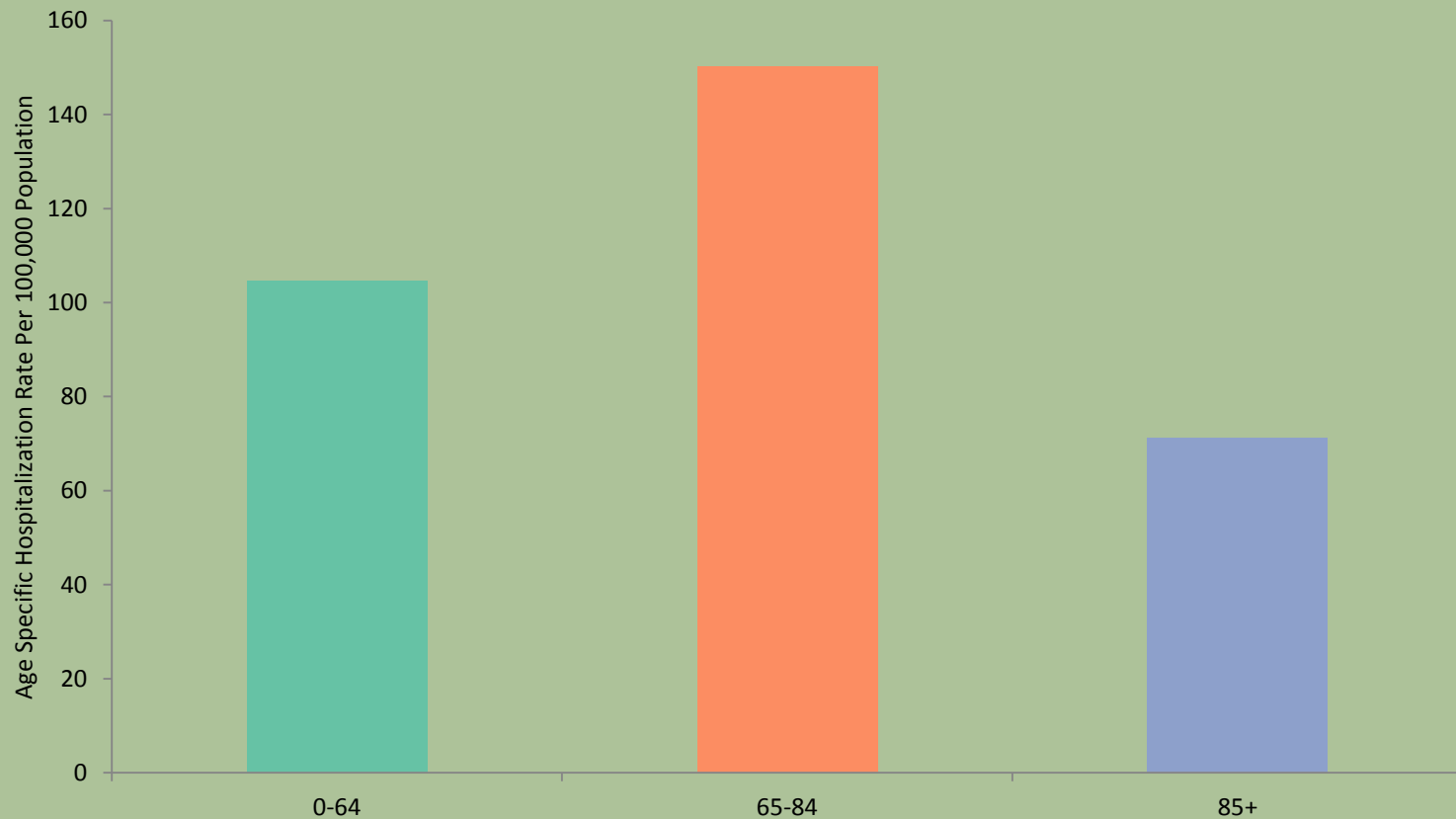


Case Study: Diabetes Mellitus

- Lifestyle
 - Obesity
 - Lack of exercise
- Control
 - Blood glucose
 - Insulin

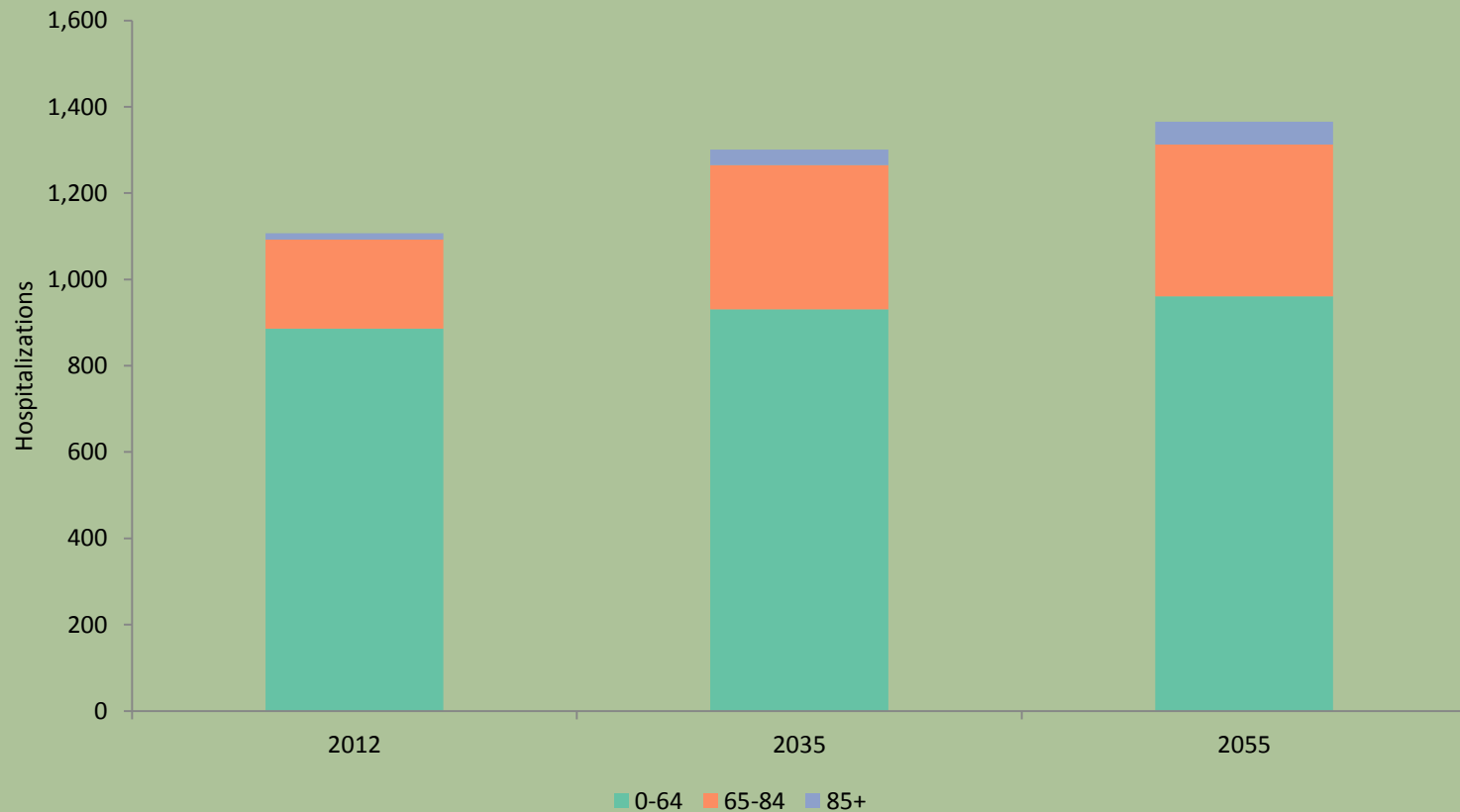
Case Study: Diabetes Mellitus

Hospitalization Rates for Diabetes (ICD-9-CM: 250.xx), Montana Residents, 2012, Montana
Hospital Discharge Data System



Case Study: Diabetes Mellitus

Current and Projected Hospitalizations for Diabetes (ICD-9-CM: 250.xx), Montana Residents, Montana Hospital Discharge Data System



Conclusions

- Large increases
 - Aged
 - Influenza
 - Hip fracture
- Small increases
 - Diabetes mellitus

Bibliography

- Population projections -
<http://ceic.mt.gov/Population/PopProjectionsTitlePage.aspx>
- Montana Hospital Discharge Data System -
<http://www.dphhs.mt.gov/publichealth/epidemiology/mthdds/>
- Hospitalization data courtesy Montana Hospital Association

